AID 485 - I

Klimatologiya

Part I (except paragraph 12 and 13) is written by Prof. S. I. Kostin, Dr. of Geogr. Sci.; Part II - by T. V. Pokrovskaya, Kand. of Geogr. Sci., Senior scientific worker at the Main Geophysical Observatory.
Part II deals with methods of climatological evaluation used in the USSR. Therefore this "Coverage" gives a full translation (with subtitles) of the Table of Contents of Part II and also of Ch. XIV of Part I, which describes the climates of the Soviet Union. In the rest, only the titles of chapters are translated. The book contains illustrations, maps, weather charts, tables, diagrams.

Table of Contents

Klimatologiya AID 485 - I

Purpose: This book is approved by the Main Administration of the Hydrometeorological Service of the Ministry of Agriculture and Procurement of the USSR as a textbook for hydrometeorological technical schools.

Facilities: Climatological Division of the Main Geophysical Observatory im. A. I. Voyekov. Many names of Soviet Scientists are mentioned in the text.

No. of Russian and Slavic References: 19 (1933-1952)

Available: A.I.D., Library of Congress

PODROVSKAYA, T. V.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Kostin, S. I. Podrovskaya, T. V.	"Climatology"	Main Geophysics Observatory imeni A. I. Voyeykovv

SO: W-30604, 7 July 1954

POKROVSKAYA, I.V.

ALISOV, Boris Pavlovich; BERLIN, Izabella Abramovna; MIKHEL', Vasiliy Mikhaylovich; RUBINSHTEYN, Yevgeniya Samoylovna, redaktor; POKROVSKAYA, [illegible] otvetstvennyy redaktor; YASNOGORODSKAYA, M.M., redaktor; KU[illegible], L.B., tekhnicheskiy redaktor.

[Course in climatology] Kurs klimatologii. Pt. 3. [Climates of the earth] Klimaty [illegible] emnogo shara. Pod red. E.S.Rubinshtein. Leningrad, Gidrometeorologicheskoe izd-vo, 1954. 320 p. (MLRA 8:2)
(Climatology) [Microfilm]

POKROVSKAYA, T.V.

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHNO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURETOV, N.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEBEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENGEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIEDEMAA, Ye.K.; SAPOZHNIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; NERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVYATKOVA, A.M.; ZAVARINA, M.V.; SHMETER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MLRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Lebedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Buchinskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor. GUGMS no.3/4:26-154 '54. (MIRA 8:3)
(Card 2)

4. Vsesoyuznyy institut rastenievodstva (for Selyaninov, Rudenko). 5. Bioklimaticheskaya stantsiya Kislovodsk (for Boshno). 6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Alisov). 7. Ministerstvo putey soobshcheniya SSSR (for Biryukov). 8. Institut geografii Akademii nauk SSSR (for Gal'tsov, Grigor'yev). 9. Geofizicheskaya komissiya Vsesoyuznogo geograficheskogo obshchestva (for Eygenson). 10. Ministerstvo elektrostantsiy i elektropromyshlennosti SSSR (for Muretov). 11. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Khromov). 12. TSentral'nyy nauchno-issledovatel'skiy gidrometeorologicheskiy arkhiv (for Sokolov, Zolotarev). 13. Gosudarstvennyy okeanograficheskiy institut (for Samoylenko). 14. TSentral'nyy institut prognozov (for Usmanov, Sapozhnikova). 15. Institut geografii Akademii nauk SSSR i TSentral'nyy institut kurortologii (for Chubukov). 16. Nauchno-issledovatel'skiy institut imeni Sechenova, Yalta (for Trotsenko). 17. Arkticheskiy nauchno-issledovatel'skiy institut (for Vangengeym).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state of climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 3) (MLRA 8:3)

18. Dal'nevostochnyy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Sokolov). 19. Institut geologii i geografii Akademii nauk Litovskoy SSR (for Styro). 20. Rostovskoe upravlenie gidrometsluzhby (for Temnikova). 21. Morskoy gidrofizicheskiy Institut Akademii nauk SSSR (for Dmitriyev). 22. Vsesoyuznyy institut rasteniyevodstva (for Malyugin). 23. Akademiya nauk Estonskoy SSR (for Liedemaa). 24. Akademiya nauk Armyanskoy SSR (for Bagdasaryan). 25. Leningradskiy gidrometeorologicheskiy institut (for Milevskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the reports (in the form of debates) [of the current state climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 4) (MLRA 8:3)

26. Gosudarstvennyy gidrologicheskiy institut (for Bochkov). 27. Kazakhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Uteshev). 28. Upravlenie gidrometsluzhby Armyanskoy SSR (for Nersesyan). 29. Leningradskoye upravleniye gidrometsluzhby (for Mikhaylov, Devyatkova). 30. Tbilisskiy gosudarstvennyy universitet (for Tsomaya). 31. TSentral'naya aerologicheskaya observatoriya (for Shmeter).
(Climatology)

POKROVSKAYA, T. V.

AID P - 2509

Subject : USSR/Meteorology

Card 1/1 Pub. 71-a - 19/26

Authors : Pokrovskaya, T. V., Kand. Geogr. Sci., and E. S. Rubinshteyn, Doc. Geogr. Sci., Prof.

Title : Research on heat interchange between continents and oceans

Periodical : Met. i Gidro., 3, 56-58, My-Je 1955

Abstract : The authors review two articles written by S. T. Pagava in 1953 and 1954 which deal with synoptic regions in the northern hemisphere. Pagava's erroneous statements in assuming the influence of the North Atlantic wind in Kazakhstan in winter and the heat transfer from the Aral Sea to the Norwegian Sea in summer, and in establishing the border of a synoptic region at 165°W longitude are disproved and his basic conceptions are strongly criticized. Six Russian references, 1928-1954.

Institution: None

Submitted : No date

POKROVSKAYA, T.V.

Scientific session in memory of A.I.Voeikov. Izv.AN SSSR.Ser.geog. no.4:154-158 Jl-Ag '56. (MLRA 9:10)
(Voeikov, Aleksandr Ivanovich, 1842-1916)

POKROVSKAYA, T.V.

36-64-2/7

AUTHOR: Pokrovskaya, T. V.

TITLE: Methods of Constructing Climatic Maps (K voprosu o metodike postroyeniya klimaticheskikh kart)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 64, pp 13-16 (USSR)

ABSTRACT: The development of climatic cartography depends on the availbility of suitable and sufficient data, the character of the landscape, the desired degree of detail, and even the author's point of view. The greater the amount of detail and the better the tie-in with local topography, the greater is the practical value of such maps. The maps range from the very generalized to very elaborate ones showing precipitation or air-temperature by means of smoothed-out isolines of radiation and thermal balance maps which are in between. The author presents sample climatic maps. Authors O. A. Drozdov, S. I. Kostin, and A. N. Rayevskiy are mentioned. There are 2 figures, 1 table, and 9 references of which 8 are Soviet and 1 American.

AVAILABLE: Library of Congress

Card 1/1

POKROVSKAYA, T. V.

AUTHOR: Pokrovskaya, T.V.

36-65-3/10

TITLE: Effect of Solar Activity on Temperature Patterns (O vozdeystvii solnechnoy aktivnosti na rezhim temperatury)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 65(127), pp. 8-18 (USSR)

ABSTRACT: Atmospheric processes are either self-exciting or activated by external cosmic forces. A statis tical approach is used in a group study of the character and degree of relationship between the daily and average monthly temperatures and the indexes of solar activity. The lack of observations at high altitudes precludes definite linking of solar and atmospheric activities, though one fact stands out clearly: the existence of a twin wave of temperature variations following the 11-year cycle of sun spots is corroborated. There are 5 figures, 2 tables, and 8 references, of which 7 are USSR, and 1 German.

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Card 1/1

POKROVSKAYA, T. V.

36-65 -7/10

AUTHOR: Pokrovskaya, T.V.

TITLE: Anomalies of Air Temperature in January for the Eurasian Continent, as Related to World Temperature Distribution (Anomalii temperatury vozdukha v yanvare na kontinente Yevrazii v svyazi s raspredeleniyem temperatury na zemnom share)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 65(127), pp. 70-82 (USSR)

ABSTRACT: The review of January temperature follows closely the common technique of "world weather" study. The usual temperature characteristics for the surface of the earth are given, with the Eurasian continent showing large temperature anomalies. Clustering of anomalies, in harmony with conditions of planetary and monsoonal circulation, is shown. There are 6 figures, 4 tables, and 9 references, of which 8 are USSR and 1 German.

AVAILABLE: Library of Congress

Card 1/1

POKROVSKAYA, Taisiya Vasil'yevna; RUBINSHTEYN, Ye.S., prof., red.; PISAREVSKAYA, V.D., red.; VLADIMIROV, O.G., tekhn.red.

[Leningrad's climate] Klimat Leningrada. Pod red.E.S.Rubinshtein. Leningrad, Gidrometeor.izd-vo, 1957. 114 p. (MIRA 11:1)
(Leningrad--Climate)

POKROVSKAYA, E.V.

Scientific session of the Main Geophysical Observatory on problems of the meterology of the layer of air on the earth's surface. Izv. AN SSSR. Ser. geog. no.5:139-142 S-O '57. (MIRA 11:2)
(Atmosphere)

POKROVSKAYA, T. V.

AUTHOR: Borisov, A.A. 12-90-2-25/30

TITLE: Book Reviews (Retsenzii)

PERIODICAL: Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva, 1958, Vol 90, Nr 2, page 200 (USSR)

ABSTRACT: The critic reviews a book named "The Climate of Leningrad" by T.V. Pokrovskaya, published by Gidrometeorologicheskoye izdatel'stvo, in 1957.

AVAILABLE: Library of Congress

Card 1/1 1. Literature-Review 2. Meteorology

ZANINA, Anastasiya Andreyevna; POKROVSKAYA, T.V., otv.red.; ZHDANOVA, L.P., red.; VLADIMIROV, O.G., tekhn.red.

[Regions of the Far East, Kamchatka, and Sakhalin] Dal'nevostochnye raiony, Kamchatka i Sakhalin. Leningrad, Gidrometeor. izd-vo, 1958. 166 p. (Klimat SSSR, no.6) (MIRA 12:2)
(Soviet Far East--Climate)

POKROVSKAYA, T.V.
P.2

3(7) PHASE I BOOK EXPLOITATION SOV/3121

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy sinopticheskoy klimatologii i geliogeofiziki (Problems of Synoptic Climatology and Heliogeophysics) Leningrad, Gidrometeoizdat, 1959. 81 p. (Series: Its: Trudy, vyp. 89) Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): L.A. Vitel's, Candidate of Geographical Sciences; Ed. (Inside book): Yu.V. Vlasov; Tech. Ed.: N.V. Volkov.

PURPOSE: These articles are intended for geophysicists and meteorologists in the field of long-range weather forecasting.

COVERAGE: This is a collection of 8 articles in the field of synoptic climatology with emphasis on the methodology of long-range forecasting and problems in heliophysics in relation to weather. An analysis is given of studies conducted in the transfer

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of moisture over European USSR and the use of the results obtained in quantitative precipitation forecasting. Problems in the formation of thermal anomalies in the USSR, taking into account the inertia of the thermal regime, macrocirculation, and heliogeophysical relations, are discussed. Forecasting the level of the Caspian Sea for the coming ten-year period on the basis of expected solar activity is attempted. Problems in the verification of long-range weather forecasts are also discussed. References accompany individual articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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Pokrovskaya, T.V.

3(8) PHASE I BOOK EXPLOITATION SOV/2270

Glavnaya geofizicheskaya observatoriya

Voprosy sinopticheskoy klimatologii (Problems in Synoptic Climatology) Leningrad, Gidrometeoizdat, 1959. 105 p. (Series: Its: Trudy, vyp. 87) 1,100 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometerologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (Title page): T.V. Pokrovskaya, Candidate of Geographical Sciences; Ed. (Inside book): T.V. Ushakova; Tech. Ed.: A. N. Sergeyev.

PURPOSE: This issue of the Observatory's Transactions is intended for meteorologists and climatologists.

COVERAGE: The authors are primarily concerned with the possibility of using various monthly characteristics of atmospheric circulation in forecasting monthly air temperature anomalies.

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Problems in Synoptic Climatology)

SOV/2270

One of the articles discusses the inertia of the temperature and its utilization in forecasting. Other articles are concerned with the effects of solar activity on atmospheric circulation. The last article is devoted to the probability of cyclical regional distribution of mean negative diurnal temperatures, offering also a synoptic and climatological analysis of the results obtained. References accompany each article.

TABLE OF CONTENTS:

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SOKHRINA, Raisa Fedorovna, nauchnyy sotrudnik; CHELPANOVA, Ol'ga Mikhaylovna, kand.geogr.nauk; SHAROVA, Valeriya Yakovlevna, kand.geogr. nauk. Prinimali uchastiye: RUBINSHTEYN, Ye.S., prof.; DROZDOV, O.A., prof., doktor geograf.nauk, red.; PRIK, Z.M.; PISAREVA, G.P., nauchnyy sotrudnik; GALINA, M.B.; KOSENKOVA, Z.D.; TIKHOMIROVA, N.A.; FEDOSEYEVA, G.N.; POKROVSKAYA, T.V., kand.geograf. nauk, red.; PISAREVSKAYA, V.D., red.; VOLKOV, N.V., tekhn.red.

[Air pressure, air temperature and atmospheric precipitation in the Northern Hemisphere] Davlenie vozdukha, temperatura vozdukha i atmosfernye osadki severnogo polushariia. Pod red. O.A.Drozdova i T.V.Pokrovskoi. Leningrad, Gidrometeor.izd-vo, 1959. 473 p. [Atlas of charts] Atlas kart. (MIRA 13:4) (Meteorology--Charts, diagrams, etc.)

BUZOVKIN, Boris Aleksandrovich; POKROVSKAYA, T.V., otv.red.; LIVSHITS, B.Kh., red.; VOLKOV, N.V., tekhn.red.

[Climate of the United States of America] Klimat Soedinennykh Shtatov Ameriki. Leningrad, Gidrometeor.izd-vo, 1960. 102 p. (MIRA 13:10)

(United States--Climate)

GIRS, Aleksandr Aleksandrovich. Prinimali uchastiye: GUROV, V.P., dotsent; KHRABROV, Yu.B., kand.fiziko-matem.nauk. POKROVSKAYA, T.V., otv.red.; VLASOVA, Yu.V., red.; BRAYNINA, M.I., tekhn.red.

[Fundamentals of long-range weather forecasting] Osnovy dolgosrochnykh prognozov pogody. Leningrad, Gidrometeor.izd-vo, 1960. 559 p. (MIRA 13:7)

1. TSentral'nyy institut prognozov (for Khrabrov).
(Weather forecasting)

GOL'TSBERG, Ida Arturovna; POKROVSKAYA, T.V., otv. red.; ZHDANOVA, L.P., red.; USHAKOVA, T.V., red.; VOLKOV, N.V., tekhn. red.

[Unseasonable frosts in the U.S.S.R., their agroclimatic characteristics and control] Agroklimaticheskaia kharakteristika zamorozkov v SSSR i metody bor'by s nimi. Leningrad, Gidrometeor. izd-vo, 1961. 197 p. (MIRA 14:7)

(Frost)

ANAPOL'SKAYA, Liya Yevseyevna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Wind velocity conditions in the U.S.S.R.] Rezhim skorostei vetra na territorii SSSR. Leningrad, Gidrometeor. izd-vo, 1961. 198 p. (MIRA 15:5)
(Winds)

SHCHERBAKOVA, Yelena Yakovlevna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Eastern Siberia] Vostochnaia Sibir'. Leningrad, Gidrometeor. izd-vo, 1961. 300 p. (Klimat SSSR, no.5) (MIRA 15:1)
(Siberia, Eastern--Climate)

POKROVSKAYA, T. V.

PHASE I BOOK EXPLOITATION SOV/5941

Kostin, Sergey Iosifovich, and Taisiya Vasil'yevna Pokrovskaya

Klimatologiya (Climatology) 2d ed., rev. and enl. Leningrad, Gidrometeoizdat, 1961. 485 p. Errata slip inserted. 5000 copies printed.

Resp. Ed.: O.A. Drozdov; Ed.: L.P. Zhdanova; Tech. Eds.: A.A. Soloveychik and M.I. Braynina.

PURPOSE: This book is intended for students of climatology, meteorology, and hydrometeorology.

COVERAGE: The present volume is a revised edition of a handbook on climatology which first appeared in 1953. Part I (except for Ch. III and sections 35 and 39) was revised by its author, S.I. Kostin; and Part II and Ch. III and sections 35 and 39 of Part I were revised by T.V. Pokrovskaya, the original writer of Part II. The following are discussed: principles, scope, and application of climatology and climatography; general atmospheric circulation; the role of radiation and circulation in the formation of climate; effect of underlying surfaces (land, water, relief, snow, vegetation) and human activity on microclimate; individual climatic elements (temperature, humidity, precipitation, cloud cover, moisture

Card 1/

DROZDOV, O.A.; POKROVSKAYA, T.V.

Estimating the role of accidental variations of the water balance and level fluctuations in landlocked lakes. Meteor. i gidrol. no.8:43-48 Ag. '61. (MIRA 14:7)
(Lakes)

POKROVSKAYA, T.V.

Evgeniia Samoilovna Rubinshtein; on her 70th birthday and 45th anniversary of scientific activities. Meteor. i gidrol. no.8: 61-62 Ag '61. (MIRA 14:7)
(Rubinshtein, Evgeniia Samoilovna, 1891-)

33247
S/531/61/000/111/001/004
D051/D113

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AUTHORS: Pokrovskaya, T.V.; Spitsyna, N.L.

TITLE: Heliogeophysical relationships in the presence of different forms of atmospheric circulation

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 111, 1961. Voprosy obshchey i sinopticheskoy klimatologii, pp 118 - 125

TEXT: Data were obtained on changes in heliogeophysical relationships depending on the initial state of atmospheric circulation at the moment of increased solar activity. The study was limited to the effects of corpuscular invasions of the ionosphere, which can be evaluated by the degree of geomagnetic turbulence. Summarizing the results of research by B. and G. Duell and R.A. Craig who investigated how geomagnetic turbulence and quietness are associated with atmospheric pressure, the authors considered that variations in this relationship may be caused by different atmospheric states on the day of increased solar activity. In order to verify this assumption, N.L. Spitsyna compiled a catalogue of daily atmospheric pressure data for the

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Heliogeophysical relationships ...

Atlantic-European region during the months reviewed by B. and G. Duell and Craig (November-February) and, subsequently, plotted pressure curves of the Duell and Craig type with certain variations in the selection of datum days. The obtained turbulence magnitudes of the pressure development were somewhat higher than those obtained by B. and G. Duell. In order to evaluate the possible effect of the state of the atmosphere, basic types of circulation were determined according to G.Ya. Vangengeym (W, E, C) for one day prior to the datum day. Mean curves were then plotted for each of these groups. For the North Atlantic (Iceland) this breakdown did not give the expected results. The difference in pressure development between turbulent and quiet days is small and regular for any type of circulation. Positive results could be obtained for other regions. Pressure graphs for Kiyev show that there is a considerable difference in pressure development for each type of circulation, particularly for type E. For the fifth day it is about 6 mb. In this connection, the authors point to a pressure decrease in Kiyev depending on a deep Icelandic cyclone which occurred at the time of a geomagnetic turbulence maximum. In order to verify the stability of the established heliogeophysical relationship for Kiyev, the entire period of investigation was divided

Heliogeophysical relationships ...

into three sections according to three solar cycles (1910-1915 [25 events]; 1920-1925 [28 events]; 1930-1936 [35 events]). It was found that the relationship is also stable on statistical grounds. An analysis of the mean development of pressure difference between turbulent and quiet days in Kiyev in the presence of all types of circulation (the differences are expressed in relative units δ) showed that the amplitude for the fifth day is 5.6 mb (4.7 δ). The probability of random appearance of such a magnitude is less than 0.1%. The authors finally compared a pressure graph of Kiyev for type E with a graph for Iceland during the appearance of a deep cyclone. The first of these shows the best relationship found by the authors for atmospheric pressure and the state of the ionosphere, whereas the second is characterized by the absence of such relationship. Discussing the features of the second case, the authors hold that for synoptical processes, at least in specific regions and for a definite type of circulation, autonomous changes and changes due to external factors are as important as those caused by solar activity. The rest of the article deals with the absence of any substantial heliogeophysical relationship for the North Atlantic. V. Yu. Vize and L.A. Vitel's are mentioned. There are 6 figures, 1 table and 5 references: 2 Soviet and 3 non-Soviet-bloc. The 3 English language references

Card 3/4

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D051/D113

Heliogeophysical relationships ...

are: B. Duell and G. Duell, The behavior of barometric pressure during and after solar particle invasions and solar ultraviolet invasions. Smithson. Miscell. Collect., vol. 110, No 8. 1948; R.A. Craig. Surface-pressure variations following geomagnetically disturbed and geomagnetically quiet days. Journal of Meteorol., vol. 9, No 2, 1952; R. Shapiro. A comparison of the response of the North American and European surface pressure distributions to large geomagnetic disturbances. Journ. of Meteorol., vol 16, No 5, 1959.

X

Card 4/4

ORLOVA, Valentina Vladimirovna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; ALEKSEYEV, A.G., tekhn. red.

[Climate of the U.S.S.R.]Klimat SSSR. Leningrad, Gidrometeoizdat. No.4.[Western Siberia]Zapadnaia Sibir'. 1962. 359 p. (MIRA 15:8)

1. Leningrad. Glavnaya geofizicheskaya observatoriya.
(Siberia, Western--Climate)

VOROB'YEVA, Yevgeniya Viktorovna; POKROVSKAYA, T.V., otv. red.; BELEN'KAYA, L.L., red.; KOTIKOVSKAYA, A.B., red.; SERGEYEV, A.N., tekhn. red.

[Interrelationship of atmospheric processes in the northern hemisphere]Sopriazhennost' atmosfernykh protsessov v severnom polusharii. Leningrad, Gidrometeoizdat, 1962. 115 p. (MIRA 15:9)

(Meteorology)

KHROMOV, Sergey Petrovich; DROZDOV, O.A., retsenzent; POKROVSKAYA, T.V., retsenzent; KAROL', B.F., otv. red.

[Meteorology and climatology for geography departments] Meteorologiia i klimatologiia dlia geograficheskikh fakul'tetov. Leningrad, Gidrometeoizdat, 1964. 498 p. (MIRA 18:1)

POKROVSKAYA, T.V.

Interrelations between nematodes of the subfamilies Cephalobinae Filipjev, 1934 and Acrobelinae Thorne, 1937 in the root knots of cucumber plants. Trudy Gel'm. lab. 16:109-114 '65.
(MIRA 19:2)

POKROVSKAYA, T.V.; [illegible]

Evaluation of the effect of snow cover on the air temperature in spring in the European part of the U.S.S.R. Trudy GGO no.181:110-113 '65. (MIRA 18:10)

POKROVSKAYA, T.V.

Succession of phytonematodes of various ecologic groups in the process of Meloidogyne infection. Trudy Gel'm. lab. 14:154-162 '64. (MIRA 17:10)

L 13775-65 EWT(1)/FCC Pa-4 AFETR/AEDC(a) GW
ACCESSION NR: AT4047617 S/2531/64/000/164/0003/0020

AUTHOR: Pokrovskaya, T. V.; Spirina, L. P.; Sudist, A. P. B

TITLE: On the problem of the influence of the underlying surface on the formation of temperature anomalies in the European SSSR in spring

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 164, 1964. Obshchaya i sinopticheskaya klimatologiya (General and synoptic climatology), 3-20

TOPIC TAGS: meteorology, climatology, atmospheric temperature, atmospheric circulation, atmospheric pressure, weather forecasting, long-range weather forecasting

ABSTRACT: This paper gives a comparative evaluation of the influence of the following factors on the value of the mean monthly air temperature in April over the European SSSR: 1) depth of the snow cover toward the end of winter; 2) ice conditions and water temperature anomalies in the Barents Sea in March; 3) temperature anomalies of surface water in the North Atlantic in March; and 4) conditions of atmospheric circulation in October-March. Depth of snow cover was studied at 50 stations; six characteristics were considered. Observational data for the

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years 1937-1951 were used. The relationship between snow cover parameters and April temperature was expressed poorly (at only 40% of the stations). The relationship between snow cover for the entire European SSSR and April temperature is better than a similar relationship considered for individual stations. The influence of the Barents Sea was considered on the basis of data for 1921-1960. It was found that the higher the temperature of the Barents Sea, the warmer are the Aprils in the European SSSR, and the quantitative indices of the influence of the Barents Sea on April temperatures are quite high. The influences of water temperature in the North Atlantic on April temperatures was determined by analysis of 15 extremely warm and 15 extremely cold years in the North Atlantic; these data were correlated with temperature anomaly data for 17 stations in the European SSSR. It was found that when the Atlantic waters are characterized by a positive anomaly in March there are temperature anomalies of both signs in April which are close to the norm. When there are negative anomalies in March in the waters of the Atlantic there are considerable positive anomalies (1.5-2.0°) in the entire European SSSR. Finally, the influence of the underlying surface was compared with the influence of atmospheric circulation. Years of maximum and minimum development of certain types of circulation were considered. Comparison of maps showing the influence of the four above-mentioned factors revealed that the influence of atmospheric circulation is greatest, although the influence of the Barents Sea is close behind, especially in the extreme north. The influence of

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ACCESSION NR: AT4047617

the snow cover and the Atlantic are about equal, but much less important than the first two factors. It is suggested that these relationships be exploited in long-range forecasting of April temperature anomalies. Orig. art. has: 9 figures and 4 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 015 OTHER: 001

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DROZDOV, O.A.; POKROVSKAYA, T.V.

Lazar' Abramovich Vitel's; on his 60th birthday. Meteor. i gidrol. no.5:62-63 My '64. (MIRA 17:6)

POKROVSKIY, A. A.

"Opredeleniye fermentiykh spektrov tkaney kak metod kharaketeristiki biokhimicheskoy individual'nosti."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

ZAVARINA, Mariya Vasil'yevna; YUDIN, Mikhail Isaakovich. Prinimali uchastiye: DMITRIYEVA-ARRAGO, L.R.; LOBANOVA, V.Ya.; BELOUSOV, S.L.; ZELIKOVSKIY, V.E.; POKROVSKAYA, T.V., otv. red.; GONDIN, L.S., otv. red.; VLASOVA, Yu.V., red.; IVKOVA, G.V., tekhn. red.

[Calculating machines and their use in meteorology and climatology] Schetnye mashiny i ikh ispol'zovanie v meteorologii i klimatologii. Leningrad, Gidrometeor. izd-vo, 1963. 263 p. (MIRA 17:3)

BUGAYEV, V.A., red.; POKROVSKAYA, T.V., red.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Transactions of the All-Union Scientific Meteorological Conference] Trudy Vsesoiuznogo nauchnogo meteorologicheskogo soveshchaniia. Leningrad, Gidrometeoizdat, Vol.3. [Section of the synoptic meteorology] Sektsiia sinopticheskoi meteorologii. Pod red. V.A.Bugaeva i T.V.Pokrovskoi. 1963. 353 p. (MIRA 16:10)

1. Vsesoyuznoye nauchnoye meteorologicheskoye soveshchaniye. 2. Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Pokrovskaya).
(Meteorology)

CHELPANOVA, Ol'ga Mikhaylovna; POKROVSKAYA, T.V., otv.red.; LIVSHITS, B.Ye., red.; ALEKSEYEV, A.G., [redacted]

[Central Asia] Sredniaia Aziia. Leningrad, Gidrometeoizdat, 1963. 446 p. (Leningrad. Glavnaia geofizicheskaia observatoriia. Klimat SSSR, no.3) (MIRA 16:8)
(Soviet Central Asia--Climate)

DROZDOV, Oleg Alekseyevich, doktor geogr. nauk; GRIGOR'YEVA, Anna Sergeyevna, kand. geogr. nauk. Prinimal' uchastiye BASHTAN, N.S., assistent; POKROVSKAYA, T.V., otv. red.; KOTIKOVSKAYA, A.B., red.; [redacted], tekhn. red.

[Moisture circulation in the atmosphere] Vlagooborot v atmosfere. Leningrad, Gidrometeoizdat, 1963. 314 p. (MIRA 16:8)

1. Kafedra meteorologii geograficheskogo fakul'teta Leningradskogo gosudarstvennogo universiteta (for Bashtan).
(Moisture)

POKROVSKAYA, T.V.

Statistical evaluation of monthly temperature forecasts in the European part of the U.S.S.R. by utilizing the characteristics of circulation according to G.Ya. Vangengeim. Trudy GGO no.133: 94-106 '62. (MIRA 16:2)

(Temperature)

S/169/62/000/012/037/095
D228/D307

AUTHOR: Pokrovskaya, T.V.

TITLE: All-Union Scientific Meteorological Conference, June 21-29, 1961

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 1-2, abstract 12B4 (Izv. Vses. geogr. o-va, 94, no. 2, 1962, 183-188)

TEXT: 1400 meteorologists and experts of allied sciences took part in an All-Union meteorological conference, devoted to the 40th anniversary of V.I. Lenin's 'Organization of the meteorological service of the USSR'. The conference heard papers on the state and development prospects of both individual branches and hydrometeorological science as a whole. A.A. Zolotukhin's paper summarized the history of development of the Gidrometeoroligicheskaya sluzhba SSSR (Hydrometeorological Bureau of the USSR). The writer stressed how the volume and the level of the Bureau's service to individual sectors of the national economy - farm aviation, sea transport, river

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S/169/62/000/012/037/095
D228/D307

All-Union Scientific ...

transport, railroad transport, power engineering, building, fishing, etc. - have increased to the present time. The publication of hydrometeorological data with an annual output of more than 5000 authors lists has been laid on. Ye.K. Fedorov's paper outlined new ways of solving problems of how to influence the weather and climate. B.A. Bugayev discussed the main problems of the theory and practice of short-term weather forecasting. The writer noted successes in pressure-field forecasting and the elimination of lag in forecasts of frontal processes and cyclogenesis. One general development trend consists of the transformation and amalgamation of synoptic methods with the calculated ones. The volume of information coming in at the present time is such that its reception and processing by hand is no longer possible. The paper by M.I. Budyko, Director of the ГГО (GGO), concerned with 'The Earth's heat balance', suggested that wide opportunities existed for considering the observed regularities and relations between the radiation and heat balance in order to forecast the weather and to explain the origin of climate. The futility of trying to explain zonality by the angle of inclination of the sun's rays, and hence the unjustified origin of the term

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'climate', was pointed out in particular. Examples were given of applications of heat balance concepts to human and animal bioclimatology. O.A. Drozdov and Ye.S. Rubinshteyn, authors of the paper 'Results of studying the climate of the USSR' - paid much attention to routine matters of the arrangement and work of the grid and to the processing of the data of climatologic observations. The plenary sessions heard a number of other papers: 'Study of the general atmospheric circulation', by Kh.P. Pogosyan; 'Contemporary methods and problems of numerical weather forecasting', by M.I. Yudin; 'Studying the atmosphere by means of rockets and artificial satellites', by B.A. Mirtov and I.A. Khvostikov. I.M. Dolgin, L.A. Laykhtman, P.P. Rusin, and A.F. Treshnikov presented a paper on the results of meteorological research in the Arctic and in Antarctica. Sectional meetings, which lasted for 6 days, began after the plenary sessions. From 40 to 60 papers were heard in each section. The resolution adopted summed up the development of the Hydrometeorological Bureau, mentioned some successes, and formulated the principal problems for the next few years, the main problem being to increase the effectiveness of forecasts. The necessity of holding similar

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meetings once every 5-7 years, and of holding All-Union meetings or conferences in intermediate years, was also noted. The conference declared in favor of forming a Vsesoyuznoye meteorologicheskoye obshchestvo (All-Union Meteorological Society), for the purpose of polularizing this science and of drawing the public into its observations and research.

[Abstracter's note: Complete translation]

POKROVSKAYA, T.V.

"Climate of the Ukraine" by I.E.Buchinskii. Reviewed by T.V. Pokrovskaia. Izv.Vses.geog.ob-va 94 no.2:181-182 Mr-Ap '62. (MIRA 15:5)

(Ukraine--Climate)

POKROVSKAYA, T.V.

All-Union Meteorological Conference of June 21-29, 1961. Izv. Vses.geog.ob-va 94 no.2:183-188 Mr-Ap '62. (MIRA 15:5)
(Meteorology--Congresses)

YEGOROVA, N.F.; POKROVSKAYA, T.Ye.

Microdetermination of carbon and hydrogen during the combustion of substances in a wide tube. Zhur. anal. khim. 19 no.3:366-368 '64. (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

POKROVSKAYA, V.A.

Effect of serpasil on the sensitivity of animals to cardiac glycosides. Farm. i toks. 28 no.6:665-667 N-D '65.
(MIRA 19:1)

1. Kontrol'no-analiticheskaya laboratoriya (nauchnyy rukovoditel'-chlen-korrespondent AMN SSSR prof. G.N.Pershin) 4-go Glavnogo upravleniya pri Ministerstve zdravookhraneniya SSSR, Moskva.

POKROVSKAYA, V.A., assistent; YAROSLAVTSEV, I.F., prof.

Development of Romanov sheep in several places. Sbor.nauch. trud. Ivan.sel'khoz.inst. no.16:151-157 '58. (MIRA 13:11)

1. Kafedra chastnoy zootekhniki Ivanovskogo sel'skokhozyaystvennogo instituta (for Pokrovskaya).
(Sheep breeds)

POKROVSKAYA, V.A., assistant; KORZENEV, M.P., prof.

Romanov sheep bred in Palekh. Sbor.nauch.trud. Ivan.sel'khoz. inst. no.16:158-164 '58. (MIRA 13:11)

1. Kafedra chastnoy zootekhniki Ivanovskogo sel'skokhozyaystvennogo instituta (for Pokrovskaya). 2. Zaveduyushchiy kafedroy chastnoy zootekhniki Ivanovskogo sel'skokhozyaystvennogo instituta (for Korzenev).

(Sheep breds)

POKROVSKAYA, V.A.

Effect of aminazine on sensitivity to cardiac glycosides [with summary in English]. Farm. i toks. 21 no.5:43-46 S-O '58 (MIRA 11:11)

1. Kontrol'no-analiticheskaya laboratoriya 4-go Glavnogo upravleniya pri Ministerstve zdravookhraneniya SSSR (nauchnyy rukovoditel' - prof. G.N. Pershin).

(CHLORPROMAZINE, effects
on heart sensitivity to cardiac glycosides (Rus))
(CARDIAC GLYCOSIDES, effects
eff. of chlorpromazine on reactivity (Rus))

L 34517-65 EWP(k)/EWA(c)/EWT(m)/EWP(b)/EWP(t)/T Pf-4 IJP MJW/JD/HW/GS

ACCESSION NR: AT4046083 S/0000/64/000/000/0263/0267 26 25 B

AUTHOR: Dityatkovskiy, Ya. M., Pul'tsin, N. M., Pokrovskaya, V. B., Vinogradov, V. A.

TITLE: Some investigations of the properties and structure of alloy VT5-1 during hot stamping

SOURCE: Soveshchaniye po metallurgii metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium; trudy* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 263-267

TOPIC TAGS: titanium alloy, titanium alloy heating, titanium alloy structure, hot pressing, titanium oxidation, titanium alloy hardness/alloy VT5-1

ABSTRACT: Hot working of titanium alloys is hampered by their chemical activity at high temperatures. Titanium reacts with the oxygen of the air and the other air components are dissolved in the metal, forming scale and increasing the hardness and brittleness at the surface. The defects must be eliminated by turning on lathes. The problem of loss of metal during stamping requires special investigations to determine the optimal heating temperature which will insure the needed plasticity and minimum waste. The waste may be measured by the increase in billet weight during heating. The present paper investigated the added weight, The depth and properties of the changed layer of the

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ACCESSION NR: AT4048083

VT5-1 alloy surface, and the alloy structure. Wedge-shaped samples were used for testing. The results showed that the VT5-1 alloy should not be heated above 1100C for forging and stamping as the metal waste increases tremendously at these temperatures. Prolongation of the heating process leads to decreased weight gain. This is explained by retardation of the saturation process. The diffusion of admixtures through the surface layer is lowered. When the temperature is increased during prolonged heat treatment, however, the decrease in the weight gain becomes less significant. Thus, at 900C, when the heating duration changes from 1/2 to 2 hours, the weight gain drops by about 66%, while at 1100C, the drop is only about 29%. This is caused by the higher diffusion at higher temperatures. Metallographic investigations confirmed previously published reports on the increase in hardness and depth of the titanium surface layer. The paper concludes that heating at temperatures above 800C, and especially above 1100C, leads to increases in weight of the alloys. Heating of the VT5-1 alloy in air at different temperatures leads to the formation of a variable surface layer, the depth, microhardness and structure of which depend on the heating duration. The highest microhardness is observed at the highest temperatures. The visible structure of the surface layer differs from the structure at the core, even though there are no actual differences in structure,

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ACCESSION NR: AT4048083

as the titanium consists of α-solid solutions throughout the entire depth. The solid solution at the surface has an equiaxial structure, while the core has a fine-grain non-equiaxial structure. This difference is caused by oxygen saturation of the surface layer, which prevents phase transforma tions. The formation of the surface layer, even though it is thin, causes cracks to form in the material while working, and possibly during operation. Orig. art. has: 2 figures and 2 tables. "Ye. A. Bodrova took part in the metallographic investigations."

ASSOCIATION: none

SUBMITTED: 15Jul64 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 000

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L 17161-65 EWT(m)/EWA(d)/EPR/EWP(t)/EWP(b) Ps-4 IJP(c)/ASD(a)-3/SSD/AFWL/AFETR MJW/JD/MLK

ACCESSION NR: AT4048079 S/0000/64/000/000/0240/0242

AUTHOR: Pul'tsin, N.M.; Rumako, M.P.; Pokrovskaya, V.B.

TITLE: The heat resistance of titanium alloy AT8 during short-term tests

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium); trudy* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 240-242

TOPIT TAGS: titanium alloy, creep, heat resistance, strength, oxidation, titanium aluminum alloy, AT8 alloy

ABSTRACT: In order to study the mechanical properties of AT8 alloy in relation to those of pure titanium and other titanium alloys, rectangular samples 2.7 mm thick, 10 mm wide, and 140 mm long, were placed in holders suspended in pendular fashion and heated by single-coil induction heaters fed with a high-frequency electric current. The temperature to which the samples were heated was measured by an optical pyrometer to an accuracy of ±10C. Experiments were carried out at temperatures of 800, 850, and 900C and stresses of 3-20 kg/mm^2. After each sample had been brought to the prescribed temperature, it was held there until it was fractured, the time necessary to effect fracture being noted; the samples were then subjected to microscopic analysis. In agreement

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ACCESSION NR: AT4048079

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with the data of previous experiments, the results show that a decrease in stress increased the time to rupture at constant temperature, while an increase in temperature at constant stress decreased the time to rupture. The rupture strength for a rupture life of 10 min was 5.5, 4.0, and 2 kg/mm^2 at 800, 850, and 900C, respectively. The total creep of the samples was similar at different temperatures, but was achieved much more rapidly at higher temperatures (20, 50, and 120 sec for comparable elongations at 880, 850, and 800C). Microscopic analysis of areas of greatest deformation, i.e., areas where the necking occurred, showed signs of striation and loosening of the material. There was no significant scale formation during the tests, due probably to the high Al content of At8 alloy. Since the experiments were conducted at temperatures far above the working temperature of AT8 and other titanium alloys, the data obtained may be used to predict the behavior of AT8 alloy in short-time operation at high temperatures. "The samples of alloy were prepared by I. I. Kornilov and V. S. Mikheyev." Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 15Jul64 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3149

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S/2598/63/000/010/0063/0070

ACCESSION NR: AT4007028

AUTHOR: Pul'tsin, N. M.; Pokrovskaya, V. B.

TITLE: Results of metallographic and x-ray diffraction examination of AT-type titanium alloys

SOURCE: AN SSSR. Institut metallurgii. Titan i yego splavy*, no. 10, 1963. Issledovaniya titanovy*kh splavov, 63-70

TOPIC TAGS: titanium alloy, AT titanium alloy, AT titanium alloy structure, AT titanium alloy hardness, AT-3 titanium alloy, AT-4 titanium alloy, AT-6 titanium alloy, AT-8 titanium alloy, AT-9 titanium alloy, AT-10 titanium alloy, complex titanium alloy, titanium aluminum chromium alloy, iron containing alloy, silicon containing alloy, boron containing alloy

ABSTRACT: In continuation of earlier work by I. I. Kornilov and others, the authors investigated the microstructure, hardness and X-ray diffraction patterns of titanium alloys AT-3, AT-4, AT-6, AT-8, AT-9 and AT-10 having various phase compositions. Forged

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cylindrical specimens were first subjected to thermal treatment under conditions selected on the basis of the phase diagram shown in Fig. 1 of the Enclosure. Metallographic examinations of these specimens by either the black-and-white method (etching with HF + HNO_3 or with H_2SO_4) or the color method described previously (Zav. lab., 1961, No. 4, p. 424) showed an α-solid solution of the interwoven or needle type in all cases. The precise type of structure was found to depend on alloy content (Al, Cr, Fe, Si, B), annealing temperature and rate of cooling during quenching. Normal X-ray analysis on the URS-70 machine confirmed that the alloys consisted mostly of the α phase; additional studies by means of the URS-50I machine permitted the construction of interference curves which revealed a small amount of the β phase (1-10% initially, 8-10% after normalization). Hardness determinations by means of the Vickers device with a load of 30 kg showed that the properties of the α-solid solution were different in each alloy, due possibly to a different degree of dispersion or to deformation of the crystal lattice. "The authors express appreciation to V. V. Obukhovskiy, I. I. Kornilov and V. S. Mikheyev for taking part in the work."

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute, AN SSSR)

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ACCESSION NR: AT4007028

SUBMITTED: 00 DATE ACQ: 27Dec63 ENCL: 01

SUB CODE: MM NO REF SOV: 007 OTHER: 000

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ACCESSION NR: AT4007028

Enclosure 01

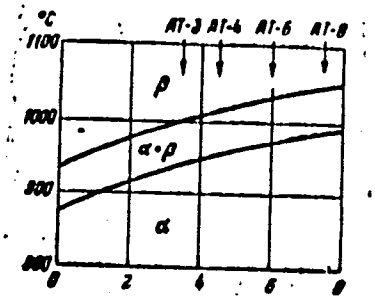

Fig. 1. Pseudobinary section of the phase diagram in the region of allotropic transformations of the alloys of the system Ti-Al-Cr-Fe-Si-B; total content of Cr-Fe-Si-B = 1.5-1.8%. Ordinate = temperature of °C; abscissa = wt.% Al.

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ACCESSION NR: AP4029538 S/0149/64/000/002/0152/0154

AUTHOR: Pul'tsin, N. M.; Dityatkovskiy, Ya. M.; Pokrovskaya, V. B.; Vinogradov, V. A.

TITLE: On the character of the surface layer structure of VT5-1 titanium alloy during high-temperature heating

SOURCE: IVUZ. Tsvetnaya metallurigya, no. 2, 1964, 152-154

TOPIC TAGS: VT5-1 titanium alloy, surface layer, titanium structure, high temperature heating, hardness, titanium, nitrogen, oxygen, solid solution

ABSTRACT: As is well known, titanium alloys undergo substantial changes in the structure and hardness of the surface layer under heating. These changes are caused by the effect of oxygen from the air diffused in the metal at a high temperature. Nitrogen has some effect, although it has less capacity to diffuse in the titanium. As has been previously shown (N. M. Pul'tsin. Izv. VUZ, Tsvetnaya metallurgiya, no. 5, p. 137 (1962)), substantial changes in the structure of the surface layer of α alloys during their saturation with oxygen does not occur; only an increase in hardness is observed due to the effect of oxygen in these alloys. The authors present some results of investigating the structure of the changed layer of monophase titanium alloy VT5-1 during high-temperature heating. It is established that as a

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result of oxygen saturation from the air at a high temperature, the surface layer undergoes a visible microscopic structural change of the α-solid solution. An illustration containing 9 microphotographs is presented to show the various changes of the surface under various conditions. The change in the structure of the surface layer without a change of the phase composition of the alloy is established. The structure of the changed surface layer and the transitional zone is distinguished in appearance from the structure of the core, although in all three regions it consists of one phase, i.e., the solid α solution. A solid solution of the surface zone has an equiaxial construction of the grains; however, the cores have a basket or fine-grained, nonequiaxial construction. This distinction in the surface is explained by the fact that the surface layer, strongly saturated with oxygen, does not undergo phase conversion in cooling after annealing, which cannot be said of the core and only partially of the transitional layer. Orig. art. has: 4 figures.

ASSOCIATION: Voyennaya inzhenernaya akademiya (Military Engineering Academy)

SUBMITTED: 03Jun63 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 001 OTHER: 000

Card 2/2

POKROVSKAYA, V. B., Cand Agr Sci -- "Sources of ~~silo~~ ensilage raw material and the ensilage-bearing qualities of the Dagestan plants" [Mos], 1961. (All-Union Sci Res Inst of ~~Forage~~ Fodder im V. R. Vil'yams) (KL, 8-61, 255)

PUL'TSIN, N.M.; SAMOYLOV, N.S.; POKROVSKAYA, V.B.

Thermal fatigue of certain titanium alloys. Izv. vys. ucheb. zav.; tsvet. met. 6 no.4:127-131 '63. (MIRA 16:8)

1. Voyenno-vozdushnaya inzhenernaya akademiya.
(Titanium alloys--Fatigue)
(Thermal stresses)

PUL'TSIN, N.M.; POKROVSKAYA, V.B.

Results of metallographic and X-ray investigations of AT titanium alloys. Titan i ego splavy no.10:63-70 '63. (MIRA 17:1)

PUL'TSIN, N.M.; POKROVSKAYA, V.B.

Effect of heat treatment on the structure and hardness of a titanium alloy with 4 % chromium. Fiz.met.i metalloved. 14 no.6:843-847 D '62. (MIRA 16:2)
(Titanium alloys--Heat treatment)

L 15579-63 EWP(q)/EWT(m)/EDS AFFTC/ASD JD/JG

ACCESSION NR: AP3000984 S/0149/63/000/002/0157/0161

63
59

AUTHORS: Pul'tsin, N. M.; Pokrovskaya, V. B.

TITLE: Surface layer on vacuum-annealed titanium alloys

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 2, 1963, 157-161

TOPIC TAGS: titanium alloy, vacuum annealing, surface layer, microstructure, vaporization

ABSTRACT: Two types of titanium alloys were subjected to annealing in evacuated quartz ampules at various temperatures and for various time periods. One alloy contained from 5 to 20% of chromium and was heated at 1100, 800, and 600C for 16, 200, and 200 hours respectively. The second alloy contained 0.5% chromium, 6% aluminum and 5% of either iron or silicon. It was subjected to temperatures of 1100, 900, 700, and 500C for 4, 200, 300, and 500 hours. After cooling to room temperature, the samples were studied with a metallographic microscope. Their hardness was determined by Vickers' instrument. The chemical composition of the surface layer and core were analyzed by Korolev's local microspectral technique, with Korolev himself performing the tests. It was found that annealing caused the surface of the alloys to assume a corroded aspect, revealing a scattered micro-

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ACCESSION NR: AP3000984

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crystalline structure. The hardness of the surface layer was higher than that of the core, and its chemical composition showed an enrichment in the alloying metals. This was due to volatilization of titanium, which was deposited on the inside surface of the ampule. Thus, the core of a 5% chromium alloy contained (after annealing) 8% of this metal, the composition of the core remaining unchanged. In an alloy containing 6% Al, 0.5% Cr and 5% Si annealing produced no significant changes in the Al and Si content of the surface layer while causing the impurities (Fe and Mo) to increase 40 and 100 times, respectively. The samples of alloys were supplied by I. I. Kornilov. The vacuum annealing of the samples was conducted with the assistance of V. S. Mikheyeva and T. S. Chernova. Orig. art. has: 4 figures.

ASSOCIATION: Voyenno-vozdushnaya inzhenernaya akademiya (Military Air Engineering Academy)

SUBMITTED: 08Dec62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: ML NO REF SOV: 004 OTHER: 000

Card 2/2

S/032/61/027/004/009/028
B110/B215

AUTHORS: Pul'tsin, N. M. and Pokrovskaya, V. B.

TITLE: Colored etching of titanium alloys

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 4, 1961, 424

TEXT: To examine the structures of titanium alloys types ВТ-2 (VT-2) and ИМП-2 (IMP-2), the authors applied the methods of oxidizing polished faces at elevated temperature (hot etching), and oxidation in the electrolyte. In hot etching, specimens of ИМП-2 (IMP-2) alloy were first polished and then etched with a reagent consisting of one part by weight of hydrofluoric acid, three parts by weight of nitric acid, and six parts by weight of water. After careful washing and drying, the ground faces were put into a muffle furnace, heated for three minutes to 600°C, and then air-cooled. After each treatment, the grains of the α-phase turned blue or bluish-violet depending on their color orientation, whereas those of the β-phase turned yellowish-brown. The larger number of inclusions in the α-phase in microphotographs is explained by the saturation of the ground face with oxygen and nitrogen (which are stabilizers of the

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Colored etching of...

α-phase) during heating to 600°C. Structural changes of the alloys may occur in hot etching. Prolonged and frequent heating to higher temperatures is therefore not suited for colored etching. Colored electrochemical etching may not cause any structural changes in the alloys. Besides, a better colored pattern of the examined structure is obtained by this method of etching. Electrochemical etching was conducted by the authors at 120 v and a current density of 0.05 a/cm^2 in the electrolyte containing 5 g of citric acid, 5 g of oxalic acid, 5 ml of orthophosphoric acid, 10 ml of lactic acid, 35 ml of water, and 60 ml of ethyl alcohol. Current was supplied in pulses of approximately 0.5 sec. The clearest pattern was obtained with ИМП-2 (IMP-2) alloy after five pulses, and with ВТ-2 (VT-2) alloy after two pulses. The color of the individual structural components in colored electrochemical etching also depends on its duration. The ground faces of the alloys types ИМП-2 (IMP-2) and ВТ-2 (VT-2) turned yellow even after a short time of etching, and then successively brown, violet, and blue due to longer etching. This sequence repeated when the process of etching was continued. In hot and electrochemical etching, the surface is recommended to be well polished, washed, and degreased. For laying the structure open, it should also be

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B110/B215

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etched by standard reagents. [Abstracter's note: Complete translation. Two colored figures cannot be reproduced]. There are 2 figures.

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VOLKOVA, Irina Ivanovna; POKROVSKAYA, Vera Borisovna; LIPATKIN, A., red.

[Injurious and poisonous plants of the Daghestan lowlands] Vrednye i iadovitye rasteniia nizmennogo Dagestana. Makhachkala, Dagestanskoe knizhnoe izd-vo, 1964. 92 p. (MIRA 18:8)

POKROVSKAYA, V.F.

Agrometeorological service for collective and state farms provided by the stations of the Hydrometeorological Service. Meteor. i gidrol. no.1:41-42 Ja '62. (MIRA 15:1)
(Meteorology, Agricultural)

POKROVSKAYA, V.I., kand. tekhn. nauk

Some problems of the strength of metal-cutting tools. Trudy DVPI 56 no.1:47-59 '62. (MIRA 17:6)

POKROVSKAYA, V.I.

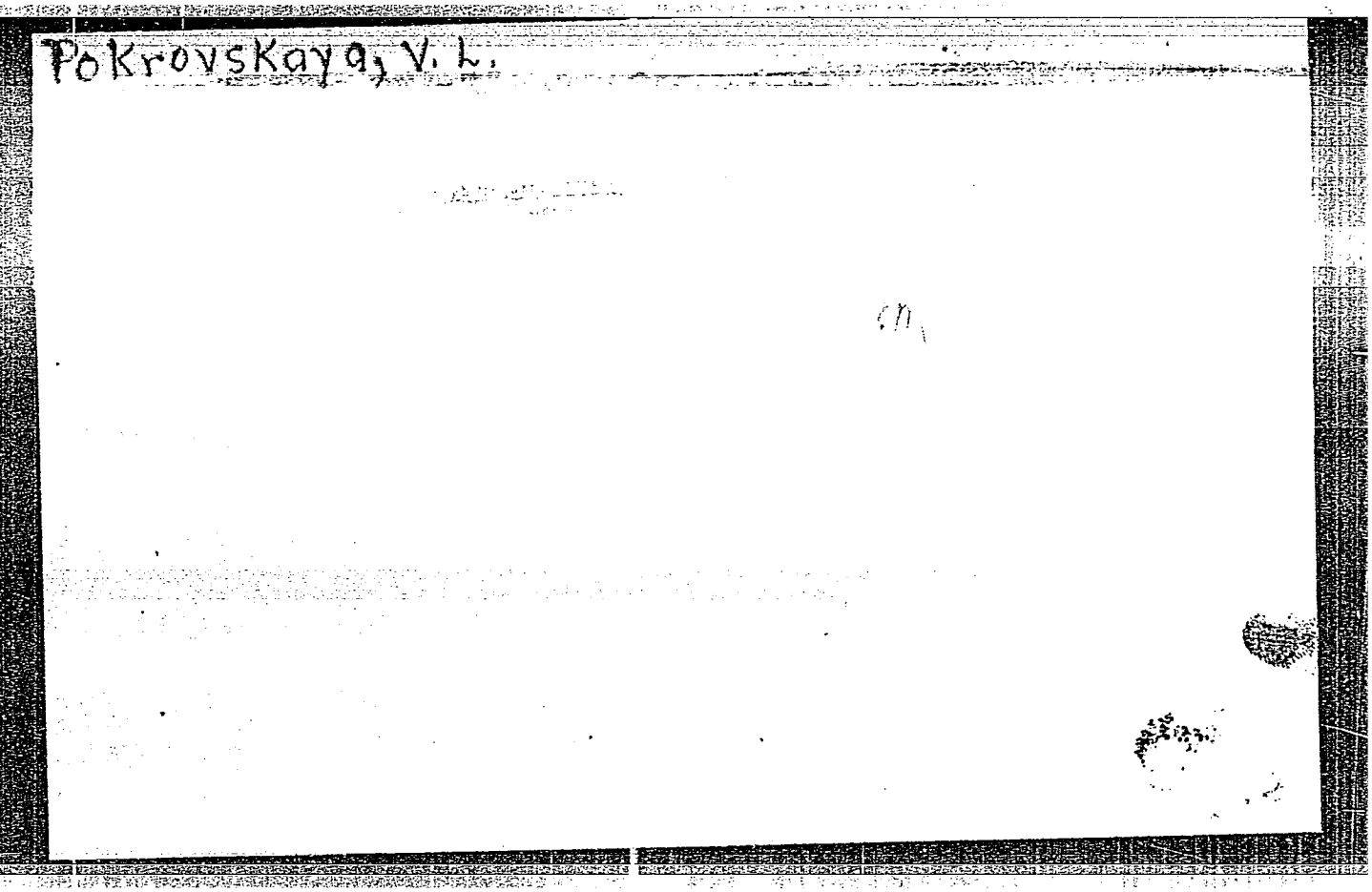
Tularemia in Novgorod Province. Trudy Len. inst. epid. i mikrobiol. 25:327-333 '63. (MIRA 17:1)

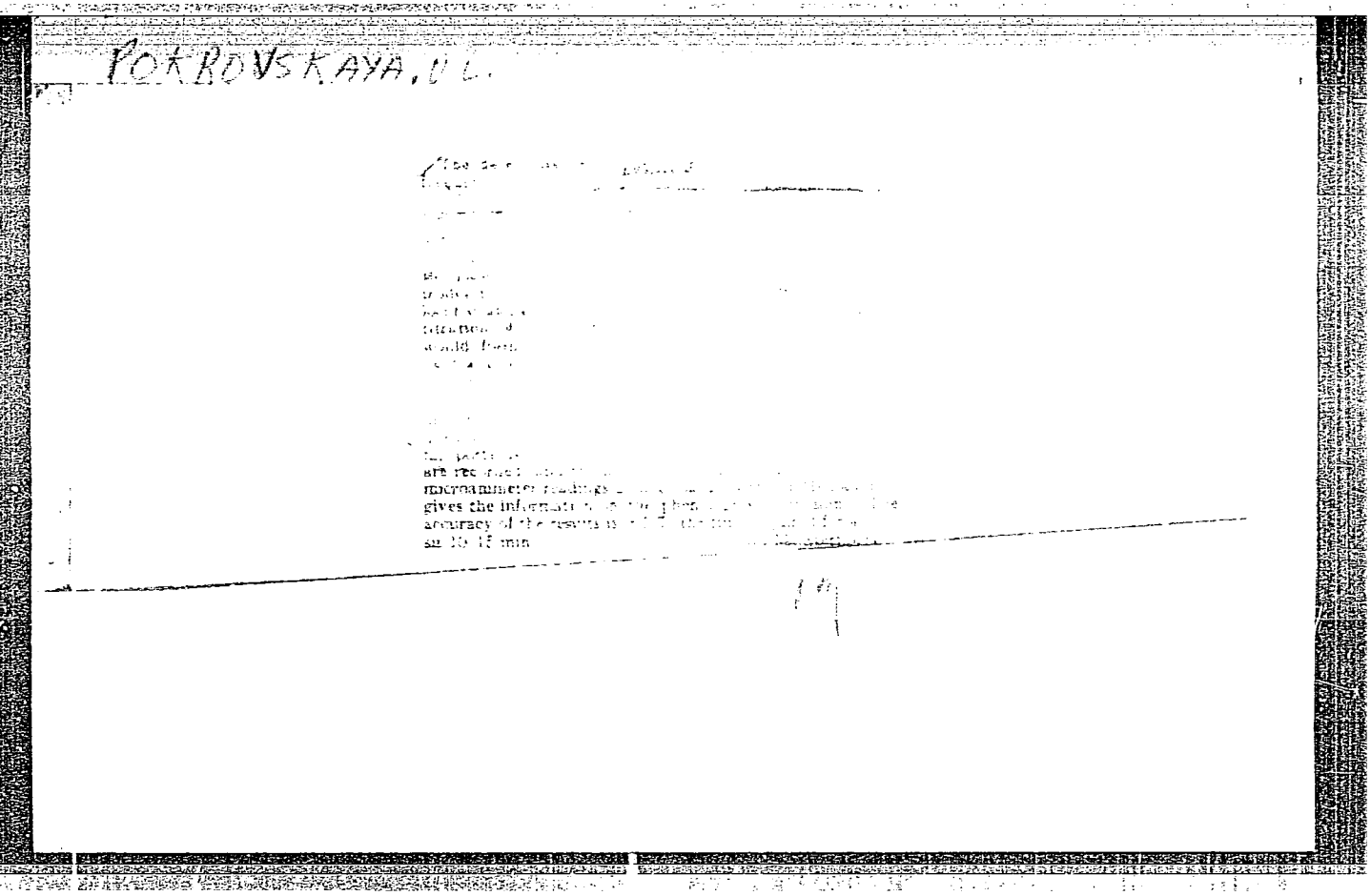
1. Iz otdela osobo opasnykh infektsiy Novgorodskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

YERSHOV, B.P.; POKROVSKAYA, V.I.; ZARINSKIY, V.A.; KOSHKIN, D.I.

High-frequency titration. Part 3. Analytical control in the manufacture of plastic materials. Zhur.anal.khim. 11 no.2:139-143 Mr-Ap '56. (MLRA 9:8)

1. Institut plasticheskikh materialov Ministerstva khimicheskoy promyshlennosti SSSR i Institut geokhimii i analiticheskoy khimii AN SSSR, Moskva.
(Titration) (Plastics)





S/191/60/000/003/012/013
B016/B054

AUTHORS: Yershov, B. P., Pokrovskaya, V. L.

TITLE: Use of High-frequency Titration to Analyze Raw Materials and Intermediate Products in the Plastics Industry

PERIODICAL: Plasticheskiye massy, 1960, No. 3, pp. 66-68

TEXT: The authors report on their more accurate and quicker high-frequency titration method of 1) xylenols alkylated with isobutylene at 70°C and 2) free formaldehyde in resins. 1) Xylenol-1,3,5, which is most important for the quality of xylenol plastics and glues, can only be determined up to 80% by the usual methods, since 20% oxidizes during the analysis. Xylenol-1,3,5 is, however, not alkylated by isobutylene at 70°C, and can be determined without any loss (Ref.3). The authors plotted a diagram representing the microammeter data as a function of the HCl admixture. The content of xylenol-1,3,5 may be determined from the formula $X = \frac{a \cdot K \cdot 0.061 \cdot 250}{b \cdot 10} \cdot 100$, where a is the HCl amount calculated from the area between the first and second breaks of the curve in the

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diagram (in ml); K is the correction coefficient for 0.5 N HCl; b is the weighed portion of initial industrial xylenol; and 0.061 is the xylenol amount corresponding to 1 ml of 0.5 N HCl (in g). 2) In developing this method, the authors based on their method of determining formaldehyde in dark-colored formalin solutions, which, in turn, is based on high-frequency titration of HCl due to the interaction of hydrochloric hydroxylamine with formaldehyde. For this purpose they used a device developed by V. A. Zarinskiy and D. I. Koshkin (Ref.5). The weighed portion of resin in alcoholic solution is mixed with a solution of neutral hydrochloric hydroxylamine, and titrated with NaOH. Similar diagrams as in case 1) are plotted, and the CH_2O content is determined (in %) from the formula $X = \frac{a \cdot K \cdot 0.15 \cdot 100}{b \cdot v}$, where a is the amount of 0.5 N alkali solution used for titration of the resulting HCl (in ml) (determined from the diagram); K is the correction coefficient of HCl for exactly 0.5 N; b is the weighed resin portion in g; and v is the solution used for

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titration. The Nizhne-Tagil'skiy zavod (Nizhne-Tagil'sk Works), the Donbasskiy zavod (Donbass Works), and the zavod "Karbolit" ("Karbolit" Works) are mentioned. There are 5 figures, 2 tables, and 5 references: 2 Soviet, 2 US, and 1 German.

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YERSHOV, B.P.; POKROVSKAYA, V.L.

High frequency titration. Determination of cresol isomers. Plast. massy no.7:65-68 '61. (MIRA 14:7)
(Cresol)

YERSHOV, B.P.; POKROVSKAYA, V.L.; DVUGLOV, S.P.; Prinimali uchastiye: BOGOMOLOVA, T.A.; LOBANOVA, R.S.

High-frequency titration. Determination of 1,2,4- and 1,2,5-xylenol isomers. Plast.massy no.10:58-60 '61. (MIRA 15:1)
(Xylenol)

POKROVSKAYA, V.M.; VORONOV, A.G., prof., red.

[Handbook for practical work on the systematics of angiosperms; for students majoring in geography] Rukovodstvo dlia prakticheskikh zaniatii po sistematike pokrytosemennykh rastenii; dlia studentov-geografov. Moskva, Mosk. univ., 1964. 197 p. (MIRA 18:9)

POKROVSKAYA, V.M.

Materials on the morphology of sprouts and seedlings of plants in northern steppes. Trudy TSentr.-Chern. gos. zap. no.6:173-198 '60. (MIRA 16:8)
(Central Chernozem Preserve--Steppe flora) (Botany--Morphology)